

**SJA**

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# ***urgent***

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f a c s i m i l e

*To:* **Kay Pinkney**  
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*From:* **Christine Alvisurez**  
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*Business Phone:* (310) 785-0140 ext. 307  
*Home Phone:*

*Pages:* 14  
*Date/Time:* 2/17/2005 12:24:32 PM  
*Subject:* Copy of IDS for 10/066,187

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Dear Mrs. Pinkney:

I have attached a copy of the unsigned IDS that was submitted to the examiner on 09/23/2004, which you requested. I hope that this copy is clearer to read. In the event that it is not, please let me know and I will do my best to give you a clearer copy.

Regards,

Christine Alvisurez  
Legal Assistant  
STATTLER, JOHANSEN, & ADELI LLP

10/666187

Based on PTO/SE/CB a &amp; b (05-03)

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Substitute for form 1449A/PTO  <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  (use as many sheets as necessary)				Application Number	10/066.187
				Filing Date	1/31/2002
				First Named Inventor	Steven Teig et al.
				Group Art Unit	2825
				Examiner Name	Tat, B.
Sheet	1	of	9	Attorney Docket Number	SPLX.P0133

U.S. PATENT APPLICATIONS						
Examiner Initials	Cite No.	U.S. Patent Application		Name of Patentee or Applicant of Cited Document	Date of Filing MM-DD-YYYY	Related Application Data if any
		Serial Number	Attorney Docket Number			
	1.	10/066,060	SPLX.P0072	Steven Teig	01-31-2002	Application filed on the same date, with same specification and drawings, but with different summary and abstract.
	2.	10/066,160	SPLX.P0073	Steven Teig et al.	01-31-2002	Application filed on the same date, with same specification and drawings, but with different summary and abstract.
	3.	10/066,095	SPLX.P0074	Steven Teig et al.	01-31-2002	Application filed on the same date, with same specification and drawings, but with different summary and abstract.
	4.	10/066,047	SPLX.P0078	Steven Teig et al.	01-31-2002	Application filed on the same date, with same specification and drawings, but with different summary and abstract.
	5.	10/061,641	SPLX.P0079	Steven Teig et al.	01-31-2002	Application filed on the same date, with same specification and drawings, but with different summary and abstract.
	6.	10/066,094	SPLX.P0080	Steven Teig et al.	01-31-2002	Application filed on the same date, with same specification and drawings, but with different summary and abstract.
	7.	10/076,121	SPLX.P0081	Steven Teig et al.	02-12-2002	Application with similar, but not identical, specification and drawing as the present application.
	8.	10/062,995	SPLX.P0105	Steven Teig et al.	01-31-2002	Application filed on the same date, with same specification and drawings, but with different summary and abstract.
	9.	10/066,102	SPLX.P0106	Steven Teig	01-31-2002	Application filed on the same date, with same specification and drawings, but with different summary and abstract.
	10.	10/286,584	CDN.P0037	Steven Teig	10-31-2002	
	11.	10/335,087	CDN.P0038	Steven Teig et al.	12-31-2002	
	12.	10/335,239	CDN.P0039	Steven Teig et al.	12-31-2002	

Examiner Signature	Date Considered
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10/066187

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Substitute for form 1449A/PTO			Application Number		10/066,187
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			Examiner Name		Tat, B.
Sheet	2	of	9	Attorney Docket Number	SPLX.P0133
<b>U.S. PATENT APPLICATIONS</b>					
	13.	10/335,086	CDN.P0040	Steven Teig et al.	12-31-2002

FOREIGN PATENT DOCUMENTS								
Examiner's Initials	Cite No.	Foreign Patent Document			Date of Publication MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	-6
		Office <sup>2</sup>	Number <sup>1</sup>	Kind Code (if known) <sup>3</sup>				
	14.	JP	11-296560		10-29-1999	Matsumoto et al.	with English translation of Abstract;	
	15.	JP	2000-082743		03-21-2000	Igarashi et al.	with Japanese Patent Office's English translation of Abstract; and with English translation of the ... application.	✓
	16.	JP	64-15947		01-19-1989	Ouchi	with English translation of Abstract;	
	17.	JP	03-173471		07-26-1991	Tawada et al.	with Japanese Patent Office's English translation of Abstract; and with English translation of the application.	✓
	18.	JP	04-000677		01-06-1992	Fujiwara et al.	with English translation of Abstract;	
	19.	JP	05-102305		04-23-1993	Sato	with Japanese Patent Office's English translation of Abstract; and with English translation of the application.	✓
	20.	JP	05-243379		09-21-1993	Kubota	with Japanese Patent Office's English translation of Abstract; and with English	✓

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Sheet	3	of	9	Attorney Docket Number		SPLX.P0133	
<b>FOREIGN PATENT DOCUMENTS</b>							
						translation of the application.	
21.	JP	07-086407		03-31-1995	Miura	with Japanese Patent Office's English translation of Abstract and with English translation of the application. ✓	
22.	JP	09-162279		06-20-1997	Yoshida	with Japanese Patent Office's English translation of Abstract and with English translation of the application. ✓	

<b>NON PATENT LITERATURE DOCUMENTS</b>							
Examiner Initials	Cite No.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.					
	23.	Chen, H.F. et al., A Faster Algorithm for Rubber-Band Equivalent Transformation for Planar VLSI Layouts, IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems, vol. 15, No. 2, February 1996, pp. 217-227.					
	24.	Chip Model with Wiring Cost Map, August 1983, IBM Technical Disclosure Bulletin, vol. 26, issu. 3A, pp. 929-933					
	25.	Dayan, T. et al., Layer Assignment for Rubber Band Routing, UCSC-CRI-93-04, January 20, 1993.					
	26.	Dayan, T., Rubber-Band Based Topological Router, A Dissertation, UC Santa Cruz, June 1997.					
	27.	Dood, P. et al. A Two-Dimensional Topological Compactor with Octagonal Geometry, 28 <sup>th</sup> ACM/IEEE Design Automation Conference, pp 727-731, July 1991.					
	28.	Fujimura, K. et al, Homotopic Shape Deformation.					
	29.	Hama, T. et al., Curvilinear Detailed Routing Algorithm and its Extension to Wire-Spreading and Wire-Fattening.					

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			First Named Inventor	Steven Teig et al.	
			Group Art Unit	2825	
			Examiner Name	Tat, B.	
Sheet	4	of	9	Attorney Docket Number	SPLX.P0133
<b>NON PATENT LITERATURE DOCUMENTS</b>					
Examiner Initials	Cite No.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published			T <sup>5</sup>
	30.	Hama, T. et al., Topological Routing Path Search Algorithm with Incremental Routability Test, IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems, vol. 18, No. 2, February 1999, pp. 142-150.			
	31.	Kobayashi, K. et al., A New Interactive Analog Layout Methodology based on Rubber-Band Routing, UCSC-CRL-96-12, June 13, 1996.			
	32.	Lim, A. et al, A Fast Algorithm To Test Planar Topological Routability, Technical Report 94-012, pp. 1-16.			
	33.	Lu, Y., Dynamic Constrained Delaunay Triangulation and Application to Multichip Module Layout, A Thesis for Master of Science, UC Santa Cruz, December 1991.			
	34.	Maley, F.M., Testing Homotopic Routability Under Polygonal Wiring Rules, Algorithmica 1996, 15: 1-16.			
	35.	Morton, P. B. et al., An Efficient Sequential Quadratic Programming Formulation of Optimal Wire Spacing for Cross-Talk Noise Avoidance Routing, UCSC-CRL-99-05, March 10, 1999.			
	36.	NN71091316, Use of Relatively Diagonal And Rectangular Wiring Planes n Multilayer Packages, September 1971, IBM Technical Disclosure Bulletin, Vol. No. 14, Issue No. 4, pp. 1316-1317.			
	37.	Staepelaere, D. et al., Geometric Transformations for a Rubber-Band Sketch, A Thesis for a Master of Science in Computer Engineering, UCSC, September 1992.			
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	41.	Xing, Z. et al., A Minimum Cost Path Search Algorithm Through Tile Obstacles, slide presentation.			
	42.	Xing, Z. et al., Shortest Path Search Using Tiles and Piecewise Linear Cost Propagation, IEEE, 2002, pp.145-158.			
	43.	Xu, A More Efficient Distance Vector Routing Algorithm, UCSC-CRL-96-18, March 1997.			
	44.	Yu, M.-F. et al., Fast and Incremental Routability Check of a Topological Routing Using a Cut-Based Encoding, UCSC-CRL-97-07, April 14, 1997.			
Examiner Signature				Date Considered	

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Substitute for form 1449A/PTO				Application Number	10/066,187
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				First Named Inventor	Steven Teig et al.
				Group Art Unit	2825
				Examiner Name	Tal, B.
Sheet	5	of	9	Attorney Docket Number	SPLX.P0133
<b>NON PATENT LITERATURE DOCUMENTS</b>					
	45.	Yu, M.-F. et al, Interchangeable Pin Routing with Application to Package Layout, UCSC-CRL-96-10, April 25, 1996.			
	46.	Yu, M.-F. et al., Pin Assignment and Routing on a Single-Layer Pin Grid Array, UCSC-CRL-95-15, February 24, 1995.			
	47.	Yu, M.-F. et al., Planar Interchangeable 2-Terminal Routing, UCSC-CRL-95-49, October 19, 1995.			
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	49.	Ahuja, R. et al., Faster Algorithms for the Shortest Path Problem, Journal of the Association for Computing Machinery, vol. 37, No. 2, April 1990, pp. 213-223.			
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	51.	Alexander, M. et al., Placement and Routing for Performance-Oriented FPGA Layout, VLSI Design, Vol. 7, No. 1, 1998.			
	52.	Andou, H. et al., Automatic Routing Algorithm for VLSI, 22 <sup>nd</sup> Design Automation Conference, 1985, pp. 785-788.			
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	54.	Berger, B. et al., Nearly Optimal Algorithms and Bounds for Multilayer Channel Routing, Journal of the Association for Computing Machinery, pp. 500-542, March 1995.			
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	56.	Carothers, K., A Method of Measuring Nets Routability for MCM's General Area Routing Problems, 1999, pp. 186-192.			
	57.	Chen, D.-S. et al., A Wire-Length Minimization Algorithm for Single-Layer Layouts			
	58.	Chen et al., Optimal Algorithms for Bubble Sort Based Non-Manhattan Channel Routing, May 1994, Computer-Aided Design of Integrated Circuits and Systems, IEEE Transactions Volume: 13 Issues, pp. 603-609.			
	59.	Chen, H., Routing L-Shaped Channels in Nonslicing-Structure Placement, 24 <sup>th</sup> ACM-IEEE Design Automation Conference, pp. 152-165, 1987.			

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Sheet	6	of	9	Attorney Docket Number	SPLX.P0133
<b>NON PATENT LITERATURE DOCUMENTS</b>					
60.	Chen, H. et al., Physical Planning of On-Chip Interconnect Architectures, 2002, IEEE, International Conference, pp. 30-35				
61.	Chen, S.-S. et al., A New Approach to the Ball Grid Array Package Routing, IEICE Trans. Fundamentals, Vol. E82-A, No. 11, November, 1999, pp. 2599-2608.				
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65.	Cong, J. et al., Efficient Heuristics for the Minimum Shortest Path Steiner Arborescence Problem with Applications to VLSI Physical Design, Cadence Design Systems, pp.88-95.				
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67.	Cong, J. et al., Performance Driven Multi-Layer General Routing for PCB/MCM Designs, UCLA Computer Science Department, 1998, pp. 356-361.				
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70.	Enbody, R. et al., Near-Optimal n-Layer Channel Routing, 23 <sup>rd</sup> Design Automation Conference, 1986, pp. 708-714.				
71.	Finch, A.C. et al., A Method for Gridless Routing of Printed Circuit Boards, 22 <sup>nd</sup> Design Automation Conference, 1985 ACM, pp. 509-515.				
72.	Gao, S. et al., Channel Routing of Multiterminal Nets, Journal of the Association for Computing Machinery, Vol. 41, No. 4, July 1994, pp. 791-818.				
73.	Gao, T. et al., Minimum Crosstalk Channel Routing, pp. 692-696, 1993 IEEE.				
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Examiner Signature		Date Considered	
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10/066187

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Substitute for form 1449A/PTO  <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  (use as many sheets as necessary)				Application Number	10/066,187
				Filing Date	1/31/2002
				First Named Inventor	Steven Teig et al.
				Group Art Unit	2825
				Examiner Name	Tat, B.
Sheet	7	of	9	Attorney Docket Number	SPLX.P0133
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10/066187

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<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  (use as many sheets as necessary)				Filing Date	1/31/2002
				First Named Inventor	Steven Teig et al.
				Group Art Unit	2825
				Examiner Name	Tat, B.
Sheet	8	of	9	Attorney Docket Number	SPLX.P0133

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10/066187

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Substitute for form 1449A/PTO				Application Number	10/066,187
<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  (use as many sheets as necessary)				Filing Date	1/31/2002
				First Named Inventor	Steven Teig et al.
				Group Art Unit	2825
				Examiner Name	Tat, B.
Sheet	9	of	9	Attorney Docket Number	SPLX.P0133
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## ELECTRONIC INFORMATION DISCLOSURE STATEMENT

Electronic Version v1.8

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<b>Title of Invention</b>	<b>Method and apparatus for routing a set of nets</b>																								
<p>                         Application Number:      10/066187 <span style="float: right;">*10/066187*</span>                          Confirmation Number:    5277                          First Named Applicant:   Steven Teig                          Attorney Docket Number: SPLX.P0133                          Art Unit:                    2825                          Examiner:                 Binh C. Tat                          Search string:            ( 4615011 or 4782193 or 5633479 or 5634093 or                          5635736 or 6128767 or 6219823 or 6226560 or                          6262487 or 6295634 or 6436804 or 6490713 or                          6546540 or 6645842 or 4673966 or 4855929 or                          5360948 or 5375069 or 5532934 or 5578840 or                          5618744 or 5636125 or 5637920 or 5650653 or                          5657242 or 5663891 or 5717600 or 5723908 or                          5742086 or 5757089 or 5757656 or 5777360 or                          5811863 or 5822214 or 5838583 or 5859449 or                          5889329 or 5889677 or 5898597 or 5914887 or                          5973376 or 5980093 or 6035108 or 6038383 or                          6058254 or 6067409 or 6068662 or 6088519 or                          6111756 or 6123736 or 20020104061 or                          20020100009 or 20020107711 or 20020182844 or                          20030005399 or 20030188281 or 20010003843 or                          20020174413 or 20030025205 or                          20030121017 ).pn.                     </p>																									
<p><b>US Patent Documents</b></p> <p>Note: Applicant is not required to submit a paper copy of cited US Patent Documents</p> <table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <thead> <tr> <th>init</th> <th>Cite.No.</th> <th>Patent No.</th> <th>Date</th> <th>Patentee</th> <th>Kind</th> <th>Class</th> <th>Subclass</th> </tr> </thead> <tbody> <tr> <td></td> <td>1</td> <td>4615011</td> <td>1986-09-30</td> <td>Linsker</td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td>2</td> <td>4782193</td> <td>1988-11-01</td> <td>Linsker</td> <td></td> <td></td> <td></td> </tr> </tbody> </table>		init	Cite.No.	Patent No.	Date	Patentee	Kind	Class	Subclass		1	4615011	1986-09-30	Linsker					2	4782193	1988-11-01	Linsker			
init	Cite.No.	Patent No.	Date	Patentee	Kind	Class	Subclass																		
	1	4615011	1986-09-30	Linsker																					
	2	4782193	1988-11-01	Linsker																					

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	49	6111756	2000-08-29	Moresco
	50	6123736	2000-09-26	Pavisc et al.

## US Published Applications

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	1	20020104061	2001-11-30	Xing et al.	A1		
	2	20020100009	2002-07-25	Xing et al.	A1		
	3	20020107711	2002-08-08	Xing et al.	A1		
	4	20020182844	2002-12-05	Igarashi et al.	A1		
	5	20030005399	2003-01-02	Igarashi et al.	A1		
	6	20030188281	2003-10-02	Xing	A1		
	7	20010003843	2001-06-14	Scepanovic et al.	A1		
	8	20020174413	2002-11-21	Tanaka	A1		
	9	20030025205	2003-02-06	Shively	A1		
	10	20030121017	2003-06-26	Andreev et al.	A1		

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## Information Disclosure Statement

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